

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-65 (Cancelled).

Claim 66 (Currently Amended): A method of providing a ~~therapeutic benefit~~  
immunotherapy to a patient comprising:

culturing ~~mature human T-cells~~ cells which are differentiated to a point where they  
~~are programmed to develop into a specific type of cell tissue~~ in a liquid culture medium  
which is replaced at a rate of at least 25% daily replacement continuously for more than one  
day and for a time sufficient to obtain ~~mature human cells~~ T-cells with enhanced biological  
~~function~~ replicative potential, which is relative to the ~~biological function~~ replicative potential  
of the human T-cells that are cultured in static culture; and

~~transferring~~ transferring said cultured human T-cells into said patient to provide  
immunotherapy to the patient.

Claim 67 (Previously Presented): The method of claim 66, wherein the culture  
medium is continuously perfused at a ramped rate proportional to the lactate concentration  
and/or cell density to replace the culture medium without substantial dilution of the cell  
density.

Claim 68 (Previously Presented): The method of claim 66, wherein replacement of  
said medium comprises perfusing fresh medium through at least part of the mass of said  
human cells.

Claim 69 (Previously Presented): The method of claim 66, wherein said medium  
comprises animal or human sera or plasma.

Claim 70 (Previously Presented): The method of claim 66, comprising maintaining  
glucose concentration in said medium in the range of from 5 to 20 mM, lactate concentration

in said medium below about 35 mM, glutamine concentration in said medium in the range of from 1 to 3 mM, and ammonia concentration in said medium below 2.4 mM.

Claim 71 (Previously Presented): The method of claim 66, further comprising removing nonadherent cells continuously, periodically, or intermittently, without disturbing adherent cells.

Claims 72-76 (Cancelled).

Claim 77 (Previously Presented): The method of Claim 66, wherein the liquid medium is replaced at a rate equal to 50 to 100% daily replacement for a cell density of from  $1 \times 10^4$  to  $1 \times 10^7$  cells per ml of culture.

Claim 78 (Previously Presented): The method of claim 77, wherein said medium comprises animal human sera or plasma.

Claim 79 (Previously Presented): The method of claim 77, comprising maintaining glucose concentration in said medium in the range of from 5 to 20 mM, lactate concentration in said medium below about 35 mM, glutamine concentration in said medium in the range of from 1 to 3 mM, and ammonia concentration in said medium below 2.4 mM.

Claim 80 (Previously Presented): The method of claim 77, further comprising removing nonadherent cells continuously, periodically, or intermittently, without disturbing adherent cells.

Claims 81-83 (Cancelled)

Claim 84 (Currently Amended): The method of Claim 66[[76]], wherein the human cells are cultured for at least 2 days.

Claim 85 (Currently Amended): The method of Claim 66[[76]], wherein the culture medium contains at least 1 growth factor which stimulates the proliferation of the cells.

Claim 86 (Cancelled).

Claim 87 (New) The method of Claim 66, wherein the immunotherapy is adoptive immunotherapy.

Claim 88 (New) The method of Claim 66, wherein the T-cells cultured are antigen specific T-cells.

Claim 89 (New) The method of Claim 88, wherein the antigen specific T cells are specific for a viral antigen.

Claim 90 (New) The method of Claim 88, wherein the antigen specific T cells are specific for a tumor reactive antigen.

Claim 91 (New) The method of Claim 66, wherein the T-cells cultured are cytotoxic T cells.

Claim 92 (New) The method of Claim 66, wherein the T-cells cultured are cytokine induced killer cells.

Claim 93 (New) The method of Claim 66, wherein the T-cells are CD3+ and CD8+ T-cells.

Claim 94 (New) The method of Claim 66, wherein the T-cells are CD3+ and CD4+ T-cells.

Claim 95 (New) The method of Claim 66, wherein the T-cells are CD3+ and CD56+ T-cells.

Claim 96 (New) The method of Claim 66, wherein the T-cells obtained by culturing have enhanced cytolysis and secretion of cytokines relative to T-cells cultured in static culture.

Claim 97 (New) The method of Claim 96, wherein the cytokines are IFN- $\gamma$ , IL-10, TNF- $\alpha$ , GMCSF and mixtures of these.

Claim 98 (New) The method of Claim 66, wherein the liquid culture medium comprises IL-2, IL-7 or both IL-2 and IL-7.